

REMARKS

It is noted with appreciation that as a result of the comments made in the Request for Reconsideration, the finality of the Examiner's last Office Action has been withdrawn. Also, it is noted that the rejection of claim 37 under 35 U.S.C. 112 as well as the rejection of claims 2, 3, 24, 25, 29, 30, 36 and 38 under 35 U.S.C. 102(b) as being anticipated by Mayer, et al. have been withdrawn.

Claims 6 and 16 have been objected to by the Examiner as being of improper dependent form for failing to further limit the subject matter of a previous claim. Since claims 6 and 16 have been cancelled from the present application, it is believed that this objection has been eliminated.

Claim 37 has been rejected by the Examiner under 35 U.S.C. 112, second paragraph, as being indefinite for failing for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Since claim 37 has been amended to eliminate the indefiniteness referred to by the Examiner, it is believed that this rejection has been eliminated.

Claims 1-6, 8-11, 13-19, 21, 22, 24-27 and 36-38 have been rejected by the Examiner under 35 USC 103(a) as being unpatentable over Dailey et al., U.S. Patent 2,571,343 (newly cited). Claims 1, 8, 17, 20, 21, 37 and 38 have been rejected by the Examiner under 35 USC 103(a) as being unpatentable over Kennedy-Skipton, U.S. Patent 4,114,384. Claims 7 and 29-34 have been rejected by the Examiner under 35 USC 103 as being unpatentable over Dailey 343 in view of Hashimoto et al., U.S. Patent 4,174,230. Claims 23 and 25 have been rejected by the Examiner under 35 USC 103(a) as being unpatentable over Dailey 343 and further in view of Morris et al., U.S. Patent 5,482,551. Finally, claim 12 has been rejected by the Examiner under 35 USC 103(a) as being unpatentable over Dailey 343 in view of Tanei et al., U.S. Patent 4,301,356. These rejections are respectfully traversed.

The Examiner has relied upon the Dailey, et al. reference, U.S. Patent 2,571,343, to disclose all the features of the present invention except, explicitly, the use of rheology modifiers. The Examiner argues that it would have been obvious to optimize the composition disclosed in the Dailey reference to produce a composition having properties of the present invention. It is believed that the Examiner's position is clearly erroneous.

The present invention is concerned with a different problem than that of the Dailey reference. The Dailey reference is concerned with making a castable gypsum composition which will provide a dense, cementitious product. It is clear, for example, from column 1, lines 9 and 10 and lines 41-44 of the reference patent that the resin employed in the composition is cured or set in the final product. This produces, as the reference states in column 1, lines 19-22, castings of a specially high strength. The present invention is concerned with an un-set gypsum paste which is self-supporting, and therefore can be extruded. This is a substantially different requirement when compared to the set strength requirement of the product of the Dailey reference. The present invention does not use a curable resin to achieve strength, but rather uses a rheology modifier to alter the rheology of the paste to achieve the self-supporting characteristics. It is also the case that the rheology modification allows the manufacturer of a product which is substantially free of macrodefects and is consequently strong and hard, but this is not the result of including in the composition a strengthening agent, but rather as a result of modifying the rheology of the gypsum paste. It is completely untenable to suppose that the uncured or un-set slurry of the reference would be self-supporting, even with the relatively low water content disclosed in the reference.

There is nothing in the Dailey reference which would suggest that a paste having the self-supporting property of the paste of the present invention can be achieved by using rheology modifiers of the type recited in the claims of the present application. Furthermore, there is no suggestion in the reference that the use of such rheology modifiers would enable a strong, hard product to be produced. In the case of the Dailey reference, a curable triazine-aldehyde resin is added to the composition to decrease the amount of water required to be mixed with the alpha-gypsum to produce a mix of pourable or fluid consistency. Thus, the invention of the Dailey

reference contemplates the mixture of a water-soluble, curable triazine-aldehyde resin with alpha-gypsum, which is capable of being cured to a hard, set water-insoluble condition. The teachings of the Dailey reference are to be contrasted with the present invention which does not utilize a triazine-aldehyde resin to control the water content of the composition, but rather directly controls the stoichiometric amount of water that is needed to achieve complete hydration of the plaster from the hemihydrate to the dehydrate state. In addition, the present invention utilizes a rheology modifier, preferably clay, in its mixture, whereby the resulting paste has a yield stress sufficient to make the paste self-supporting. Although the Examiner argues that the Dailey reference discloses the possible use of a clay, the prior art reference merely mentions clay as one of the many possible fillers which may be added to its gypsum composition. Basically, the problem solved by the present invention leads to the specific differences between the present invention and the Dailey reference as pointed out herein above, and thus to reject the claims, the Examiner must reconstruct the teachings of the Dailey reference in view of the applicant's own disclosure.

The Examiner further rejects the claims of the present application over the teachings of the Kennedy-Skipton reference, US Patent 4,114,384. This reference discloses a pumpable gypsum slurry (see for example, column 1, lines 9-11), which is incomplete contrast to the self-supporting paste of the present invention. The paste of the present invention would be quite unsuitable for pumping as it would require very powerful pumps, if indeed it was pumpable at all. Similarly, the amount of water in the slurries of the reference is considerably in excess of the near stoichiometric amounts of the present invention because of the need to pump the slurry. Thus, one looking to make a self-supporting, unset gypsum paste, exhibiting the high-yield stress of the present invention would not look to the teachings of the Kennedy-Skipton reference, which is seeking to make a gypsum slurry with precisely the opposite properties.

Although, as the Examiner points out, the reference discloses that the composition may include as much filler, which could be a clay, as the amount of the gypsum plaster, in practice, this is unlikely to occur. If equal parts of clay and gypsum plaster are used in a composition, a vast amount of water would be required in order to make the slurry pumpable. Such a slurry

would not meet the requirements of the present claims, that it must be suitable for manufacturing a product by extrusion, stamping, pressing, rolling, injection molding, etc. If the slurry contains as much clay as gypsum, the set product is as likely to be terracotta with a gypsum filler as plaster with a clay filler.

In rejecting the claims of the present application, the Examiner appears to be impressed by the fact that the prior art references use a binder. However, with this focus in mind, the Examiner appears to have given insufficient weight to the requirement in the present claims for the use of a rheology modifier to provide a paste which is self-supporting, there-by allowing the extrusion of the paste, and providing a product which is substantially free of macrodefects.

Because both of the references discussed herein above go in a completely different direction when compared to the present invention, neither reference can provide an un-set gypsum slurry which is self-supporting and extrudable.

Since all of the remaining rejections made by the Examiner always rely upon the teachings of the Dailey reference and since none of the secondary references correct the deficiencies of the Dailey reference, it is believed that for all the reasons set forth herein-above, all of the rejections made by the Examiner are untenable.

Accordingly, in view of the above amendments and remarks reconsideration of the rejections and allowance of all the claims of the present application are respectfully requested.

Conclusion

In view of the above remarks, it is believed that claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Joseph A. Kolasch Reg. No. 22,463 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/823,783
Amendment dated October 16, 2007
Reply to Office Action of April 16, 2007

Docket No.: 0014-0201PUS2

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a three (3) months extension of time for filing a reply in connection with the present application, and the required fee of \$1050.00 is being charged to Deposit Account 02-2448.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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